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Total Number of pages in this Submission	9+

Application Number	10/825,494
Filing Date	04/15/2004
First Named Inventor	Joel Q. Xue
Group Art Unit	
Examiner Name	
Attorney Docket Number	5024-00120

ENCLOSURES (check all that apply)

- ☐ Fee Transmittal Form
 - ☐ Fee Attached
- ☐ Amendment/Response
 - ☐ After final
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☒ Information Disclosure Statement/PTO-1449
- ☐ Certified Copy of Priority Document(s)
- ☐ Response to Missing Parts/ Incomplete Application
 - ☐ Response to Missing Parts Under 37 1.52 or 1.53
- ☐ Assignment Papers (for an Application)
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition Checklist and Accompanying Petition
- ☐ To Convert a Provisional Application
- ☐ Power of Attorney, Revocation, Change of Correspondence Address
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- ☐ Status Letter
- ☒ Additional Enclosure(s) (Please identify below)

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Remarks

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Firm Or Individual Name	Joseph D. Kuborn, (Reg. No. 40,689) ANDRUS, SCEALES, STARKE & SAWALL, LLP 100 East Wisconsin Avenue, Suite 1100, Milwaukee, WI 53202
Signature	Joseph Kub
Date	September 7, 2004

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

SEP 0 9 2004
PATENT & TRADEMARK OFFICE

Application Of:

JOEL Q. XUE ET AL

Application No. 10/825,494

Filed: 04/15/2004

Group Art Unit:

Examiner:

METHOD AND APPARATUS FOR DETECTING CARDIAC REPOLARIZATION ABNORMALITY

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Sir:

Pursuant to revised Rules 56 and 98, the Applicant would like to make of record the patents and publications listed on the attached PTO Form 1449. These documents may be material to the patentability of the above-captioned invention. A copy of each foreign patent and publication is enclosed.

Since no Office Action has been received on the application, it is believed that no fee is due in connection with this Statement. However, if a fee is due, this is your authorization to charge Deposit Account No. 01.2000 for any such fee.

Respectfully submitted,

ANDRUS, SCEALES, STARKE & SAWALL, LLP

By _____
Joseph D. Kuborn
Reg. No. 40,689

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100 East Wisconsin Avenue, Suite 1100
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(414) 271-7590
Attorney Docket No.: 140823IT (5024-00120)

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 7

Complete if Known	
Application Number	
Filing Date	April 15, 2004
First Name Inventor	Joel Q. Xue
Group Art Unit	
Examiner Name	
Attorney Docket Number	

U.S. PATENT DOCUMENTS

Examiner Initials		U.S. Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document
		4,589,420	Adams et al.	5/20/1986
		4,457,315	Bennish	7/3/1984
		5,201,321	Fulton	4/13/1993
		4,854,327	Kunig	8/8/1989
		5,025,795	Kunig	6/25/1991
		4,989,610	Patton et al.	2/5/1991
		4,977,899	Digby et al.	12/18/1990
		4,958,641	Digby et al.	9/25/1990
		4,928,690	Heilman et al.	5/29/1990
		4,860,762	Heumann et al.	8/29/1989
		4,679,144	Cox et al.	7/7/1987
		4,432,375	Angel et al.	2/21/1984
		4,422,459	Simson	12/27/1983
		4,202,340	Langer et al.	5/13/1980
		5,117,834	Kroll et al.	6/2/1992
		4,492,235	Sitrick	1/8/1985
		4,458,692	Simson	7/10/1984
		4,458,691	Netravali	7/10/1984

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	Group Art Unit	
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Sheet 2 of 7	Attorney Docket Number	

U.S. PATENT DOCUMENTS

Examiner Initials		U.S. Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document
		4,974,598	John	12/4/1990
		5,117,833	Albert et al.	6/2/1992
		5,000,189	Throne et al.	3/19/1991
		4,519,395	Hrushesky	5/28/1985
		4,136,690	Anderson et al.	1/30/1979
		5,570,696	Arnold et al.	11/5/1996
		5,819,741	Karlsson et al.	10/13/1998
		5,343,870	Gallant et al.	9/6/1994
		6,453,191	Krishnamachari	9/17/2002
		4,802,491	Cohen et al.	2/7/1989
		5,935,082	Albrecht et al.	8/10/1999
		5,148,812	Verrier et al.	9/22/1992
		5,265,617	Verrier et al.	11/30/1993
		5,437,285	Verrier et al.	8/1/1995
		5,560,370	Verrier et al.	10/1/1996
		5,921,940	Verrier et al.	7/13/1999
		6,169,919	Nearing et al.	1/2/2001
		4,896,677	Kaneko et al.	1/30/1990
		4,732,157	Kaplan et al.	3/22/1988
		4,972,834	Begemann et al.	11/27/1990
		5,042,497	Shapland	8/27/1991
		5,188,116	Pommrehn et al.	2/23/1993

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Sheet 3 of 7	Attorney Docket Number	

U.S. PATENT DOCUMENTS

Examiner Initials		U.S. Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document
		5,277,190	Moulton	1/11/1994
		3,554,187	Glassner et al.	1/12/1971
		4,802,491	Cohen et al.	2/7/1989
		4,924,875	Chamoun	5/15/1990
		4,974,162	Siegel et al.	11/27/1990
		3,902,479	Chaumet	9/2/1975
		4,170,992	Dillman	10/16/1979
		4,603,703	McGill et al.	8/5/1986
		4,665,485	Lundy et al.	5/12/1987
		3,759,248	Valiquette	9/18/1973
		4,316,249	Gallant et al.	2/16/1982
		4,938,228	Righter et al.	7/3/1990
		4,951,680	Kirk et al.	8/28/1990
		4,955,382	Franz et al.	9/11/1990
		4,832,038	Arai et al.	5/23/1989
		4,475,558	Brock	10/9/1984
		4,616,659	Prezas et al.	10/14/1986
		3,658,055	Abe et al.	4/25/1972
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		3,952,731	Worstencroft	4/27/1976
		4,181,135	Andresen et al.	1/1/1980
		4,417,306	Citron et al.	11/22/1983

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Sheet 4 of 7

Complete if Known	
Application Number	
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First Name Inventor	Joel Q. Xue
Group Art Unit	
Examiner Name	
Attorney Docket Number	

U.S. PATENT DOCUMENTS

Examiner Initials		U.S. Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document
		5,423,878	Franz	6/13/1995
		5,253,650	Wada	10/19/1993
		4,124,894	Vick et al.	11/7/1978
		4,979,510	Franz et al.	12/25/1990
		5,020,540	Chamoun	6/4/1991
		4,583,553	Shah et al.	4/22/1986
		4,680,708	Ambos et al.	7/14/1987
		4,796,638	Sasaki	1/10/1989
		5,092,341	Kelen	3/3/1992
		5,109,862	Kelen et al.	5/5/1992
		5,570,696	Arnold et al.	11/5/1996
		5,323,783	Henkin et al.	6/28/1994
		5,234,404	Tuttle et al.	8/10/1993
		5,010,888	Jadvar et al.	4/30/1991

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	Filing Date	April 15, 2004
	First Name Inventor	Joel Q. Xue
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Sheet 5 of 7	Attorney Docket Number	

FOREIGN PATENT DOCUMENTS

Examiner Initials		Country Code	Foreign Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document	Translation	English Abstract
		DE	2604460	Michael S. Lampadius	8/11/1977		
		DE	3303104	Belorussky Nauchno-Issledovatelsky Institut Kardiologii	8/2/1984		
		DE	4024360	Transformatoren und Rontgenwerk GmbH	3/21/1991		
		EP	0080821	Datamedix, Inc.	6/8/1983		
		FR	2539978	Belorussky Nauchno-Issledovatelsky Institut Kardiologii	8/3/1984		
		UK	2070871	Anderson et al.	9/9/1981		
		WO	WO81/02832	Datamedix, Inc.	10/15/1981		

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
		Speranza et al., 'Beat-to-beat measurement and analysis of the R-T interval in 24 h ECG Holter recordings,' Med and Biol Eng & Comput, 1993, 31, pp. 487-494.
		Narayanaswamy et al., 'Selective beat signal averaging and spectral analysis of beat intervals to determine the mechanisms of premature ventricular contractions,' University of Oklahoma Health Sciences Center, May 1993, pp. 81-84.
		Laks et al., 'ECG computer program developed for a retrospective and prospective study of the Pardee T wave,' Department of Medicine, UCLA School of Medicine, Harbor-UCLA Medical Center, Torrence, CA, 1992, pp. 365-368.
		Makarov et al., 'Holter monitoring in the long QT syndrome of children and adolescents,' Cor Vasa, 1990, 32(6), pp. 474-483.
		Navarro-Lopez et al., 'Isolated T wave alternans elicited by hypocalcemia in dogs,' Electrocardiology, 1978, 11(2), pp. 103-108.

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		Little et al., 'Torsade de Pointes and T-U wave alternans associated with arsenic poisoning,' Pace, 1990, 13, pp. 164-170.
		Weintraub et al., 'The congenital long QT syndromes in childhood,' Journal of the American College of Cardiology, September 1990, 16(3), pp. 674-680.
		Bibler et al., 'Recurrent ventricular tachycardia due to pentamidine-induced cardiotoxicity,' Chest, December 1988, 94(6), pp. 1303-1306.
		Ahnve et al., 'Circadian variations in cardiovascular parameters during sleep deprivation, A noninvasive study of young healthy men,' European Journal of Applied Physiology, 1981, 46, pp. 9-19.
		Surawicz, 'ST-segment, T-wave, and U-wave changes during myocardial ischmeia and after myocardial infarction,' Canadian Journal of Cardiology, Supplement A, July 1986, pp. 71A-84A.
		Stroobandt et al., 'Simultaneous recording of atrial and ventricular monophasic action potentials: monophasic action potential duration during atrial pacing, ventricular pacing, and ventricular fibrillation,' Pace, July-August 1985, 8, pp. 502-511.
		Sharma et al., 'Romano-Ward prolonged QT syndrome with intermittant T wave alternans and atrioventricular block,' American Heart Journal, 1981, pp. 500-501.
		Navarro-Lopez et al., 'Isolated T wave alternans,' American Heart Journal, 1978, pp. 369-374.
		Mitsutake et al., 'Usefulness of the Valsalva Maneuver in management of the long QT syndrome,' Circulation, 1981, 63(5), pp. 1029-1035.
		Nearing et al., 'Personal computer system for tracking cardiac vulnerability by complex demodulation of the T wave,' American Physiological Society, 1993, pp. 2606-2612.
		Joyal et al., 'ST-segment alternans during percutaneous transluminal coronary angioplasty,' Division of Cardiology, Department of Medicine, University of Florida and the Veterans Administration Medical Center, June 1984, pp. 915-916.
		Schwartz et al., 'Electrical alternation of the T-wave: clinical and experimental evidence of its relationship with the sympathetic nervous system and with the long Q-T syndrome,' American Heart Journal, January 1975, 89(1), pp. 45-50.
		Schwartz, 'Idiopathic long QT syndrome: progress and questions,' American Heart Journal, February 1985, 109(2), pp. 399-411.
		Verrier et al., 'Electrophysiologic basis for T wave alternans as an index of vulnerability to ventricular fibrillation,' Journal of Cardiovascular Electrophysiology, May 1994, 5(5), pp. 445-461.

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Sheet	7	of	7	Attorney Docket Number	

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		Verrier et al., 'Behavioral states and sudden cardiac death,' Pace, September 1992, 15, pp. 1387-1393.
		Turitto et al., 'Alternans of the ST segment in variant angina,' Chest, March 1988, 93(3), pp. 587-591.
		Ring et al., 'Exercise-induced ST segment alternans,' American Heart Journal, May 1986, 111(5), pp. 1009-1011.
		Wayne et al., 'Exercise-induced ST segment alternans,' Chest, May 1983, 83(5), pp. 824-825.
		Verrier et al., 'Ambulatory electrocardiogram-based tracking of T wave alternans in postmyocardial infarction patients to assess risk of cardiac arrest or arrhythmic death,' Journal of Cardiovascular Electrophysiology, July 2003, 14(7), pp. 705-711.

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